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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,968	10/21/2003	Sung-Wook Kang	1349.1272	8115

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EXAMINER	
KUMAR, RAKESH	
ART UNIT	**PAPER NUMBER**
3654	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/688,968	KANG, SUNG-WOOK	
	Examiner	Art Unit	
	Rakesh Kumar	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/13/2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2-5 and 7* is/are allowed.

6)☒ Claim(s) *1,6 and 8-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/07/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Final Rejection

1. Applicant's arguments filed 10/13/2005 have been fully considered but they are not persuasive for reasons detailed below.

The prior art rejections are maintained or modified as follows:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,6,8,9,10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Embry (Patent No. 5,868,385) in view of Hsieh (Patent No. 6,352,256).

4. Referring to Claims 1 and 8. Embry teaches of a paper-feeding device that uses a motor (21) (Col. 3 line 24) as the basis to drive media (5) from the media Tray (7). The rotation of the motor (21) is used to rotate a pickup drive shaft (9) (Col. 3 line 25-26 see Figure 5). Embry also discloses a link housing (1) containing a train of gears and is pivotally mounted onto a pickup drive shaft (9) (Col. 2 lines 23-31). The two pickup rollers (3a and 3b) that contact with the media (5) are connected to the link housing (1)

as is shown in Figure 1. Embry also discloses a clutch mechanism (Col. 3 line 1-5) shown in Figure 2 as being mounted to the link housing (1) through bracket extension (1a) (Col. 2 line 43) and simultaneously being attached to the drive shaft (9) as to allow the housing (1) a range of movement when the drive shaft (9) is rotated by the motor (21).

Hsieh teaches of a paper-feeding device that utilizes the bi-directional rotation (104 and 106) of the pickup drive shaft (32) to drive media from the media tray (22) (see Figures 2-5 Col. 3 lines 11 and 38). The pivoting link housing (34) is also driven in the first and the second direction as the pickup drive shaft is rotated in corresponding directions by the accompanying motor (52) (Col. 3 lines 14 and 40). The pickup roller (36) is connected to the link housing (34) (Col. 2 line 60) and is coupled to the pick up drive shaft through interconnected gears (Col. 3 line 6). Hsieh discloses when the pickup drive shaft (32) rotates in the first direction (104) the link housing (34) rotates to make contact with media tray (22) and once the contact is made the link housing (34) is prevented from further rotating and a slip occurs between the link housing and the pickup drive shaft. The rotation of the pickup drive shaft is then delivered to the pickup roller (36) to allow the pickup roller to push sheets from the media tray (Col. 3 line 10-33). When the pickup drive shaft (32) rotates in the second direction (Col. 3 line 36) the link housing (34) is rotated in the second direction and the pickup roller (36) is removed from the surface contact of the media tray. Another predetermined swing limit is also imposed on the link housing (34) to prevent it from swinging completely around the pickup drive shaft (32) (Col. 3 lines 36-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the teaching of Embry and use a bi-directional motor (Col. 2 line 5;Hsieh) to generate a drive force as taught be Hsieh because the engaging pickup rollers could be disengaged from the surface of the media and thus prevent deformation of the roller surface caused by extended resting when the apparatus is not in use. Furthermore, as stated in the teaching of Hsieh above the link housing is prevented from pivoting in a second direction when the link housing has engaged the media and the motor is rotating in the first direction.

5. Referring to Claim 8. See above. The rejection stated above hold true to the structure claimed in the claim.

6. Referring to Claim 9. See above. Hsieh discloses a torque limiter (39), which is used to connect the link housing (34) to the pickup drive shaft (32) (see figure Col. 3 lines 21-23). It is understood that a torque limiter device is a clutch.

7. Referring to Claims 6 and 10. Embry teaches of a media feeding device using a gear configuration in a pivoting housing link (1) about a pickup drive shaft (9) through a spring clutch mechanism (19, 17 and 15). The teachings also disclose that the spring clutch mechanism could be replaced with a one-way ratchet mechanism or a counterpart without changing the embodiment of the feeding device (Col. 3 line 44-50).

Hsieh teaches of using a torque limiter (39) connected to a pickup drive shaft (32) and a link housing (34) to engage the media tray. As described in Hsieh the torque limiter allows the rotation of the link housing to rotate until a predetermined loading point is reached and the torque limiter begins to slip and stops the further rotation of the link housing (Col. 3 line 21-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Embry with the teaching of Hsieh to use a pre-manufactured friction clutch/torque limiter mechanism consisting of an inner race attached to the pickup drive shaft and an outer race in contact with the inner race and the link housing to create a moveable arm. As a result the number of components in the gear assembly can be reduced.

8. Referring to Claim 15. Hsieh teaches of a paper-feeding device that utilizes the bi-directional rotation (104 and 106) of the pickup drive shaft (32) to drive media from the media tray (22) by using the drive force produced by the rotation of the motor (52) (see Figures 2-5 Col. 3 lines 11 and 38). The pivoting link housing (34) is also driven in the first and the second direction as the pickup drive shaft is rotated in corresponding directions by the accompanying motor (52) (Col. 3 lines 14 and 40). The pickup roller (36) is connected to the link housing (34) (Col. 2 line 60) and is coupled to the pick up drive shaft through interconnected gears (Col. 3 line 6). Hsieh discloses when the

pickup drive shaft (32) rotates in the first direction (104) the link housing (34) rotates to make contact with media tray (22) and once the contact is made the link housing (34) is prevented from further rotating and a slip occurs between the link housing and the pickup drive shaft. The rotation of the pickup drive shaft is then delivered to the pickup roller (36) to allow the pickup roller to push sheets from the media tray (Col. 3 line 10-33). When the pickup drive shaft (32) rotates in the second direction (Col. 3 line 36) the link housing (34) is rotated in the second direction and the pickup roller (36) is removed from the surface contact of the media tray. Another predetermined swing limit is also imposed on the link housing (34) to prevent it from swinging completely around the pickup drive shaft (32) (Col. 3 lines 36-49).

Allowable Subject Matter

9. Claims 2-5 and 7 are allowed.

10. Claims 11-14 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

11. Applicant's arguments that the prior art fails to teach the claimed features are unpersuasive.

12. In claim 1, in particular, Applicant's focus on Embry apparatus not comprising a bi-directional motor is misplaced. The Applicant is reminded that the initial submitted claim for examination did not disclose a bi-directional motor in the structure of the claim. However, if the apparatus of Embry is viewed in conjunction with the teaching provided by apparatus of Hsieh, it is apparent that Hsieh uses a bi-directional motor in line with a clutch mechanism to pivot the housing link about an the axis of a driving shaft. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the two apparatuses.

Furthermore in claim 1, the Application attempts to overcome the rejection by superficially modifying the prior claim, by examination it is deemed that more structure has not been added to circumvent the ground of the prior rejection. In particular, the link housing is pivoted by a predetermined angle by rotation of the pickup drive shaft as the motor rotates in the first direction (See Hsieh; Claims 1 and 15), the housing link then engages the media surface, unable to pivot further the clutch engages and allows the pickup rollers to rotate, thus the housing link is prevented from pivoting in the first direction and also a second direction while still engaged with the motor rotating in the first direction (Col. 3 line 21-26).

Regarding claim 8, the Applicant recites "the link housing is prevented from pivoting", as disclosed by Hsieh and stated in the corresponding claims the apparatus of Hsieh clearly sates that the housing link is prevented from pivoting once it has engaged the media surface.

Information Disclosure Statement

13. The Applicant is reminded that the second Information Disclosure Statement filled November 07, 2005 has not been considered due to the fact that it is not translated into English.

14. Examiner has maintained the prior art rejections, statutory rejections and drawing objections as previously stated and as modified above.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

15. Any references not explicitly discussed above but made of record are considered relevant to the prosecution of the instant application.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh Kumar whose telephone number is (517) 272-8314. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see

http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RK
December 29, 2005

Kathy Matecki

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